

SOROKIN, Yu.I.

Role of dark bacterial assimilation of carbon dioxide in the  
trophic system of the bodies of water, Mikrobiologiya 33 no.5:  
880-886 S-O '64. (MIRA 18:3)

1. Institut biologii vnutrennikh vod AN SSSR.

SOROKIN, Y.I.

Bacterial chemosynthesis in the Black Sea. Izv. SSSR Ser. biol. no. 3:  
413-422 My-Je '65. (MIRA 16:5)

I. Institut biologii vnutrennikh vod AN SSSR.

SCROKIN, Yu.I.

Symposium on the Primary Production; International Biological  
Program. Gidrobiol. zhur. 1 no. 6:64-65 '65 (MIRA 19'1)

1  
SOROKIN, Yu.I.; PANGV, D.A.

Balance of the demand and consumption of food by the bream larvae  
at various stages of their development. Dokl. AN SSSR 165 no.2:  
454-456 N '65. (MIRA 18:11)

1. Institut biologii vnutrennikh vod AN SSSR. Submitted  
January 4, 1965.

KARLINER, M.M.; SOROKIN, Yu.K.

Graduation of diode noise generators based on the reciprocity principle. Izv.tekh. no.10:49-52 0 '61. (MIRA 14:11)  
(Oscillators, Electron-tube)

SOROKIN, Yu.L., inzh.

Testing of louver separators. Energomashinostroenie 7 no.2:  
5-9 F '61. (MIRA 16:7)

(Boilers)

SOROKIN, Yu.L., inzh.

Use of louvered separators in the internal system of steam  
boiler drums. Energomashinostroenie 8 no.4:11-14 Ap '62.  
(MIRA 15:4)  
(Boilers) (Separators (Machinery))

SOROKIN, Yu.L. (Novosibirsk)

Stability conditions of certain motions of gas-liquid  
mixtures in vertical pipes. PMTF no. 6:160-165. N-D '63.  
(MIRA 17:7)



KUZ'MIN, N.P.; SOROKIN, Yu.L.; ROYZMAN, A.Ye.

Methodology of designing separators in evaporating units.  
TSvet. met. 38 no.2:59-64 F '65. (MIRA 18:3)

SOROKIN, Yu.M., inzh.

Measurement of the temperature of the armature windings of d.c.  
machinery. Vest.elektroprom. 33 no.4:58-61 Ap '62. (MIRA 15:4)  
(Electric machinery--Direct current)

SOROKIN, Yu.M., inzh.

Measurement of the temperature of a two-way single-turn shorted  
loop winding using a resistance method. Elektrotehnika 35 no.  
2:12-15 F '64. (MIRA 17:3)

GORDEH, Yu. N. (LNU)

GORDEH, Yu. N. (Cher) --"CONSTITUTION OF RUSSIAN METALLURGISTS OF THE MID 19TH CENTURY TO THE THEORY AND PRACTICE OF THE METALLURGY OF STEEL (P. M. GURKHOV, A. G. LAVROY, H. V. KALAKUTSKIY, YE. YE. KARATAYEV)." SUB 30 OCT 52, MOSCOW ORDER OF LABOR RED BANNER INST OF STEEL IMENI I. V. STALIN (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCES)

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1952

SOROKIN, Yu.N.

D.K. Chernov's scientific legacy. Trudy po ist. tekhn. no.2:78-90 '53.

(MIRA 6:6)

(Chernov, Dmitrii Konstantinovich, 1839-1921)

SOROKIN, Yu.N.

E.E.Karataev's cast steel. Trudy po ist. tekhn. no.3:72-84 '53.  
(MIRA 7:5)

(Karataev, Egor Egorovich, 1830- )  
(Steel castings--History)

SOROKIN, Yu.N.

Vladimir Efimovich Grum-Grzhimailo; 25th anniversary of his death.  
Izv.AN SSSR Otd.tekh.nauk no.11:1645-1648 N '53. (MLRA 6:12)

1. Predstavleno ohlenom-korrespondentom Akademii nauk SSSR A.M.Samarinym.  
(Grum-Grzhimailo, Vladimir Efimovich, 1864-1928)

*SOROKIN, Yu. N.*

ANOSOV, Pavel Petrovich, 1797-1851; VOLODINA, M.I., redaktor; BARDIN, I.P., akademik, redaktor; GUDTSOV, N.T., akademik, redaktor; SAMARIN, A.M., redaktor; STARK, B.V., redaktor; PROKOSEVICH, D.A., doktor tekhnicheskikh nauk, redaktor; VISHNYAKOV, D.Ya., doktor tekhnicheskikh nauk, redaktor; DAVIDENKOV, V.A., doktor tekhnicheskikh nauk, redaktor; RASTEGAYEV, M.V., kandidat tekhnicheskikh nauk, redaktor; SOBKIN, Yu.N., kandidat tekhnicheskikh nauk, redaktor; MURZIN, I.I., ~~tekhnicheskiy~~ redaktor; ASTAF'YEVA, G.A., tekhnicheskiy redaktor

[Collected works] Sobranie sochinenii. Moskva, Izd-vo Akademii nauk SSSR, 1954. 204 p. (MLSA 7:10)

1. Chlen-korrespondent AN SSSR (for Samarin, Stark)  
(Metallurgy)



SOROKIN, Yu.N.

A.S.Lavrov, the outstanding Russian metallurgist. Trudy po ist.tekh.  
no.4:109-125 '54. (MLRA 7:9)

(Lavrov, Aleksandr Stepanovich, 1838-1904)

SOROKIN, Yu.N., kandidat tekhnicheskikh nauk.

Science seminars in the history of natural science and technology.  
Vest.AN SSSR 24 no.4:88-89 Ap '54. (MLRA 7:5)  
(Natural history--History) (Technology--History)

PROKOSHKIN, D.A., professor, doktor; SOROKIN, Yu.N., kandidat tekhnicheskikh nauk.

History of steel smelting in Russia. Sbor.Inst.stali no.32:5-19  
'54. (MLRA 10:5)

1.Kafedra metallovedeniya i termicheskoy obrabotki.  
(Steel--Metallurgy)  
(Lavrov, Aleksandr Stepanovich, 1838-1904)

SOROKIN, Yu.N., kandidat tekhnicheskikh nauk; VOROB'YEV, B.N.; KONDRAT'YEV,  
V.A.; YUR'YEV, B.N., akademik, redaktor: SAMARIN, A.M., redaktor;  
KUZNETSOV, I.V., kandidat filosofskikh nauk, redaktor; YUNISOVA,  
G.V., redaktor; ZELENKOVA, Ye.V., tekhnicheskiy redaktor

[Aleksandr Fedorovich Mozhaiskii, creator of the first airplane; a  
collection of documents] Aleksandr Fedorovich Mozhaiskii sozdatel'  
pervogo samoleta; sbornik dokumentov. Moskva, 1955. 174 p.

(MLRA 8:7)

1. Chlen-korrespondent AN SSSR (for Samarin). 2. Akademiya nauk  
SSSR. Institut istoriyestestvoznaniya i tekhniki.  
(Mozhaiskii, Aleksandr Fedorovich, 1825-1890)

TEREKHOV, P.G.; KOSHTOYANTS, Kh.S., otvetstvennyy redaktor; BONDARENKO, N.P., redaktor; MOLCHANOVA, O.P., redaktor; SOBOKIN, Yu.N., redaktor; FIGUROVSKIY, N.A., redaktor; SHAPIRO, F.B., redaktor izdatel'stva; SIMKINA, Ye.N., tekhnicheskiiy redaktor

[Heritage of science] Nauchnoe nasledstvo. Moskva. Vol.3. [Ivan Mikhailovich Sechenov; unpublished works, notes and papers] Ivan Mikhailovich Sechenov; neopublikovannye raboty, perepiska i dokumenty. 1956. 280 p. (MLRA 9:8)

1. Akademiya nauk SSSR. Institut istoriiyestestvoznaniya i tekhniki. (Sechenov, Ivan Mikhailovich, 1829-1905)

SOROKIN, Yu. N.

Henry Bessemer. Vop. ist. est. i tekhn. no. 1: 158-167 '56. (MLRA 9:10)

(Bessemer, Henry, 1813-1898)

Papers submitted for the 10th Pacific Science Congress, Honolulu, Hawaii 21 Aug-6 Sep 1961.

- BIOLOGICAL, A. V., Marine Hydrophysics Institute, Academy of Sciences USSR  
 "Investigation into the role of the physical factors in the formation of the  
 plankton under aseptic conditions" (Section VII.C.1)  
 BERNIKOVA, D. A., Institute of Oceanology - "Some regularities concerning  
 the seasonal distribution of chemical characteristics in the waters of  
 the central part of the Pacific" (Section VII.C.1.1)  
 BIRULOV, B. A., All-Union Scientific Research Institute of Marine Fishing  
 and Oceanography - "Shallow water" - a new means for marine  
 scientific investigations" (Section VII.C.1.2)  
 BLOKHIN, V. I., Institute of Oceanography - "The distribution of deep-sea  
 biocenoses in the Pacific in connection with food conditions" (Section VII.C)  
 BOBKOVA, Zh. B., Institute of Biology of Reservoirs, Academy of Sciences  
 USSR - "The marine fauna and the piscary production of photo-  
 synthesis in the sea" (Section VII.C.1.1)  
 BRODWAY, B. A., Institute of Biology of Reservoirs, Academy of Sciences  
 USSR - "The problem of Beringian continental connection in the ombio-  
 geographic classification" (Section VII.A.0.3)  
 BROVET, B. G., and SMIRNOV, V. A., Institute of Oceanology - "The emergence  
 of deep oceanic currents with the application of anchor buoy  
 method, sparrows, satellites" (Section VII.B.5) Oceanology - "Geographic  
 changes" A. A., and PRIGOR, A. V., "The Pacific" (Section VII.0.1)  
 BUDNOV, V. I., Institute of Oceanology - "New data on the tectonic of  
 southern seas" (Section VII.C)  
 CHUMAKOV, D. D., Institute of Oceanology - "The ethnologic study of the  
 people of Oceania in the USSR" (Section II.0)  
 DUBININ, D. B., Institute of Oceanology - "Features of evolution in the  
 bottom zoogeography of the Pacific Ocean" (Section VII.C.1.1)  
 VAKHAROV, V. A., Institute of Oceanology - "Cretaceous flora of the  
 Pacific coast in the USSR as a basis for the subdivision of continental  
 deposits of this age" (Section VII.C)  
 VIKHAROVA, R. G., Institute of Oceanology - "Geographical distribution  
 of asynal bottom fauna and the problem of vertical tectonic"  
 (Section III.C)  
 VYSHINSKI, G. B., Moscow State University, Geographical Faculty -  
 "The role of the Pacific Ocean in the evolution of the Pacific" (Section VII.C)  
 VYSHINSKI, G. B., Institute of Oceanology - "The island reefs and the pelagic  
 faunal fauna in the western part of the Pacific bath" (Section VII.C)  
 ANDREYEV, T. B., and KILIN-SHCHUK, V. I., Institute of Earth Physics  
 Lenin O. N., Scientific - "Some possibilities in interpretation of surface  
 waves of the Pacific" (Section VII.C.2)  
 JAKHIN, A. L., Institute of Geology - "The tectonic map of Eurasia"  
 (Section VII.C)  
 JAKOVLEV, A. V., Institute of Geology - "The tectonic map of Eurasia"  
 Academy level 0. N. Kory - "Spec problem involved with wood stulice  
 in southeast Asia" (Section III.A.1)  
 KERNOV, M. A., Asst. Director, geographical Museum, Moscow State  
 University - "The physico-geographical evolution of the Subarctic and  
 the North Islands" (Section VI.C)  
 KILIN-SHCHUK, V. I., Institute of Earth Physics - "On the relation between  
 the Pacific and the Atlantic Oceanic floras of Australia, New Zealand,  
 and Russia" (Section III.A)  
 KERNOV, L. A., and TILATOV, Z. A., Institute of Oceanology - "General  
 regularities in the quantitative and qualitative distribution of the  
 bottom fauna in the Pacific" (Section III.C)  
 KILIN-SHCHUK, T. B., and KILIN-SHCHUK, V. I., Institute of Earth Physics  
 study in methods of primary production investigation of fresh-water  
 plankton" (Section III.C)  
 KILIN-SHCHUK, A. V., Institute of Oceanology - "Cyclophysiological investigation  
 of temperature adaptations of invertebrates in the northwestern area of  
 the Pacific Ocean" (Section III.C)  
 KILIN-SHCHUK, A. V., Institute of Oceanology - "Oscillations of western ocean  
 zoogeography" (Section VII.D.1)

SOROKIN Yu. V.

20-1-32/54

AUTHOR

TSETKOV Yu.D., VOYEVOVSKIY V.V., RAZUVAYEV G.A.,  
SOROKIN Yu.V., DOMRACHEV G.A.

TITLE

Electron Spin Resonance in Some Sandwich Type Chromaromatic Compounds.  
(Elektronnyy paramagnitnyy rezonans v nekotorykh khromaromaticheskikh soyedineniyakh sandvichevogo stroyeniya -Russian)

PERIODICAL

Doklady Akad.Nauk SSSR, 1957, Vol 115, Nr 1, pp 118- 121 (U.S.S.R.)

ABSTRACT

In recent times increased interest was devoted to the study of the mentioned compounds of the ferrocene type,  $(Fe(C_5H_5)_2)$ , the ferrocene ion and analogous molecules with aromatic addenda. In spite of a great number of papers on this subject, there hitherto exists no general theory which might explain the present data on the "sandwich" structure of these molecules. Their formation and steadiness cannot be fully explained by the generally accepted conception of valence. The data obtained indicate that in the majority of compounds of this type the linkage of addenda with the complex-forming atoms is of a covalent character. This is especially indicated by magnetic measurements. According to the latter these materials are either diamagnetic or they possess a magnetic momentum which corresponds to one, two or at most three non-paired electrons. The ion salts of these metals of such compounds by the method of electronic paramagnetic resonance (called EPR in the following) have hitherto been described in publications. The present paper gives measurements of the EPR spectra of the following compounds:  $Cr(C_6H_6)_2J$  (I),  $Cr(C_6H_5)_2J$  (II) and  $Cr(C_6H_5 - C_6H_5 - C_6H_5)_2OC_6H_5$  (III). The static magnetic susceptibility

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Electron Spin Resonance in Some Sandwich Type Chromaromatic Compounds. 20-1-32/54

of these materials corresponds to a single- non-coupled electron. The presence of a hydrogen-overrefined structure of the absorption line in solutions of the materials II and III can be explained in two ways. 1. The non-coupled electron and the positive charge of the complex are located on the chromium atom. The estimation made on the basis of this assumption shows that the density of the non-coupled 3d-electron on the positions of the hydrogen atoms of the aromatic rings is sufficient to effect an "overrefined" cleavage of the EPR spectrum. 2. The non-coupled electron and the positive charge are located on the aromatic addenda of the complex. The overrefined structure is in this case due to the interaction of the non-paired  $\pi$ -electron of the aromatic ring with the hydrogen atoms of this ring. The extent of cleavage, the number of components and the ratio of their intensities are in this case dependent on the distribution of electron density on the addenda molecule. The following facts speak in favor of the first assumption: a) presence of the anisotropy of the g-factor in the materials I and II, b) the value of the g-factor is less than that of a free electron. The true picture of density distribution of the non-coupled electron is probably a superposition of the two extremum cases mentioned above.  
(2 illustrations, 2 Slavic references.)

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20-1-32/54

Electron Spin Resonance in Some Sandwich Type Chromaromatic  
Compounds.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR, Gor'kovskiy  
gosudarstvennyy universitet

PRESENTED BY NESMEYANOV, A. N., Academician, April 19, 1957

SUBMITTED 13.4.1957

AVAILABLE Library of Congress

Card 3/3

L 23074-65  
ACCESSION NR: AP5001264

erator and for the heat transfer. During the operation of about 2 years, fuel consumption is about 30,000 Mw-day/tons of uranium. The second reactor is a modernization of the first reactor. Details are given of the construction, and the effects of various characteristics on the exploitation cost are estimated. Orig. art. has: 7 figures

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NR REF SOV: 005

OTHER: 003

Cord 2/2

ACCESSION NR: AP4029831

S/0279/64/000/002/0026/0030

AUTHOR: Khly<sup>\*</sup>nov, V. V. (Sverdlovsk-Zlatoust); Yesin, O. A. (Sverdlovsk-Zlatoust);  
Khasin, G. A. (Sverdlovsk-Zlatoust); Vachugov, G. A. (Sverdlovsk-Zlatoust); Sorokin,  
Yu. V. (Sverdlovsk-Zlatoust)

TITLE: On the mechanism of extracting nonmetallic impurities from steel drops in  
slag

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 2, 1964, 26-30

TOPIC TAGS: ShKh-15 steel, ANF-6 slag, EI-736 steel, impurity, extraction

ABSTRACT: The authors investigated the passing of ShKh-15 steel drops through a layer of fused ANF-6 slag and its purification from non-metallic impurities. The amount of large impurities decreased during this process to a greater degree than did the fine impurities. Impurities larger than 10  $\mu$ , present in the initial metal, disappeared completely. This cannot be the result of flotation, since the metal of the mobile drop was intensely agitated. It was experimentally shown that the content of solid, non-metallic impurities in ShKh-15 and EI-736 steels decreased by passing drops through an ANF-6 slag layer. The content of the impurities decreased with an increase of the path length in accordance with the law of attenuation.

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ACCESSION NR: AP4029831

Larger impurities were extracted faster than fine impurities. The higher the impurity concentration, the more rapidly they were eliminated from the metal. The impurity content in large drops fell slower than in fine drops. The obtained regularities were qualitatively and quantitatively clear, stemming from a definite mechanism impurity extraction. It was assumed that the internal eddy movements of the impurity delivers the drops to the surface layer which remained there without returning into the metal. Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: none

SUBMITTED: 18Oct63

DATE ACQ: 30Apr64

ENCL: 00

SUB CODE: ML

NO REF SOV: 008

OTHER: 000

Card 2/2

KHLYNOV, V. V.; SOROKIN, Yu. V.; YESIN, O. A.; KHASIN, G. A.; VACHUGOV,  
G. A.

Character of the movement of steel drops in slag. *Izv. vys.ucheb.*  
zav.; chern.met.7 no. 5:22-25 '64. (MIRA 17:5)

1. Ural'skiy politekhnicheskii institut i Zlatoustovskiy  
metallurgicheskii zavod.

KRAMEROV, A. Ya.; MARKOV, Yu.V.; SKVORTSOV, S.A.; DENISOV, V.P.;  
KULIKOV, Ye.V.; SOROKIN, Yu.P.; STEROL'NIKOV, V.V.; KHOKHLAGHEV,  
A.A.; TATARNIKOV, V.P.; SIDORENKO, V.A.

Some ways of developing water-moderated water-cooled reactors.  
Atom. energ. 17 no.6:427 D '64 (MIRA 18:1)

28513-66 EWI(m)/I/EWP(t)/ETI IJP(c) JD/WR

ACC NR: AP6016593 (A,N)

SOURCE CODE: UR/0129/66/000/005/0049/0052

AUTHORS: Sorokin, Yu. V.; Minkevich, A. N.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Nitriding steel in a mixture of nitrogen and ammonia

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 5, 1966, 49-52

TOPIC TAGS: alloy steel, metallurgic process, nitrification, nitridation, corrosion resistance/ 4Kh14N14V2M alloy steel, 25Kh18N8V2 alloy steel, Kh17G9AN4 alloy steel, 38KhMYuA alloy steel, 35KhMYuA alloy steel

ABSTRACT: The effect of nitriding the alloy steels 4Kh14N14V2M, 25Kh18N8V2, Kh17G9AN4, 38KhMYuA, and 35KhMYuA in a mixture of 20--30% ammonia and 80--70% nitrogen on the hardness, brittleness, depth, and corrosion stability of the nitride layer was investigated. The microstructure of the surface layer was also studied. The experimental results are presented in graphs and tables (see Fig. 1). Dilution of ammonia with nitrogen (up to 80% nitrogen) had no effect on the hardness or depth of the nitride layers and slightly increased the corrosion stability and fatigue limit. The results of corrosion experiments are in good agreement with the results of A. G. Andreyeva and L. Ya. Gurevich (MITOM, 1959, No. 4). It is concluded that the best nitriding results are obtained with a mixture of 20--30% ammonia and 80--70% nitrogen.

Card 1/2

UDC: 621.785.53:546.17:546.171.1



L 28513-66

ACC NR: AP6016593

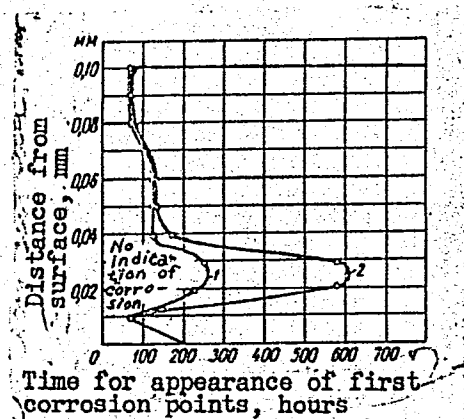


Fig. 1. Change in the corrosion stability along the depth of the nitride layer in steel 4Kh14N14V2M exposed to sea water.  
1 - nitriding in ammonia (depth of layer 0.1 mm);  
2 - in mixture of 70% N<sub>2</sub> + 30% NH<sub>3</sub>.

Orig. art. has: 1 table and 3 figures.

SUB CODE: 11, 07/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001

Card 2/2 c ✓

L 45892 EWT(m)/EWP(w)/I/EWP(t)/ETI IJP(c) JD/JW  
 ACC NR: AP6026150 (A) SOURCE CODE: UR/0076/66/040/007/1598/1603

AUTHOR: Sorokin, Yu. V.; Khlynov, V. V.; Yasin, O. A.

ORG: Ural Polytechnic Institute (Ural'skiy politekhnicheskiy institut)

TITLE: Kinetics of spreading of a fluoride-oxide melt on solid oxides

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 7, 1966, 1598-1603

TOPIC TAGS: calcium fluoride, aluminum oxide, fluid flow, surface tension, irreversible thermodynamics

ABSTRACT: The spreading of ANF-6 melt (70%  $\text{CaF}_2$ , 30%  $\text{Al}_2\text{O}_3$ ) on plates of  $\text{Al}_2\text{O}_3$ ,  $\text{MgO}$ ,  $\text{ZrO}_2$ ,  $\text{SiO}_2$ , and on a surface precoated with the same liquid was studied at 1480-1720°C with the aid of high-speed motion-picture photography (3000 frames per second). Two stages were observed in the spreading process. In the first stage, the liquid assumes an irregular shape with breaks in its surface. The rate  $v$  at which the plate becomes covered at this stage is independent of the surface tension of the drop, but depends on the temperature; the activation energy values indicate a viscous character of the resistance to the flow of the liquid. At a constant temperature,  $v$  depends on the plate material and decreases in the series  $\text{Al}_2\text{O}_3$ ,  $\text{MgO}$ ,  $\text{ZrO}_2$ ,  $\text{SiO}_2$  (on the precoated plate  $v$  is approximately the same as on  $\text{SiO}_2$ ). The transition to the second stage is due to the action of the tension of the melt. In this stage,  $v$  is much lower than in

Cord 1/2

UDC: 532.61

SOROKIN, Zakhar Artem'yevich, Geroy Sovetskogo Soyuza: TARAN, G.I., red.;  
ISUPOVA, N.A., tekhn.red.. . . . .

[No, I am not through with flying] Net, ne otletalsia; vospo-  
minania letchika. Simferopol', Krymizdat, 1958. 94 p.  
(Pilots)

95-58-7-39/45

AUTHOR: Sorokin, Z., Hero of the Soviet Union

TITLE: Under the Polar Sky (V nebe zapolyariya); An Autobiographical Account (avtobiograficheskaya povest')

PERIODICAL: Kryl'ya rodiny, 1958, Nr 7, pp 28-30 (USSR)

ABSTRACT: The author tells of his childhood, his hopes of becoming a pilot and his early training. (To be continued)

Card 1/1 1. Autobiography

SOV/85-58-9-27/33

AUTHOR: Sorokin, Z., Hero of the Soviet Union  
TITLE: In the Skies of the Arctic (V nebe Zapolyariya)  
PERIODICAL: Kryl'ya rodiny, 1958, Nr 9, pp 29-31 (USSR)  
ABSTRACT: The author, an Air Force Lieutenant assigned to the arctic during the Second World War, tells of the first combats in which he participated under famous Soviet commanders. There are 3 photographs and 3 sketches. (To be continued).

Card 1/1

SOV/85-58-11-28/33

AUTHOR: Sorokin, Zakhar, Sr. Lieutenant, Hero of the Soviet Union

TITLE: In the Skies of the Arctic; An Autobiographical Tale (V nebe Zapolyar'ya, avtobiograficheskaya povest')

PERIODICAL: Kryl'ya rodiny, 1958, Nr 11, pp 27-29 (USSR)

ABSTRACT: The author tells of his miraculous escape from the Arctic, his recovery and eventual return to the Murmansk front. There are 3 pictures and 1 photograph. [To be concluded].

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(

CZECH/3-59-15-24/32

AUTHOR: Sorokin, Z., USSR Hero

TITLE: A Memorable Fight

PERIODICAL: Křídla Vlasti, 1959, Nr 15, pp 22-24 (CSR)

ABSTRACT: The author, a WWII fighter pilot, writes about his experiences following an emergency landing in a deserted section of the Kola peninsula during WWII. There are 2 photos and 2 sketches.

Card 1/1

SOROKIN, Z.A., Geroy Sovetskogo Soyuza

"The land and sea under us" by S.G.Kurzenkov. Reviewed by Z.A.  
Sorokin. Vest.Vozd.Fl. no.7:88-89 J1 '61. (MIRA 14:8)  
(World War, 1939-1945—Aerial operations)  
(Kurzenkov, S.G.)



SOROKIN, Z., Garoy Sovetskogo Soyuza

Wonderful destinies. Kryl.rod. 12 no.8:20 Ag '61. (MIRA 14:8)  
(Air pilots)

SOROKIN, Zakhar, Geroy Sovetskogo Soyuza

Good conscience. Av.1 kosm. 45 no.5:74-76 My '63.

(MIRA 16:5)

(World War, 1939-1945--Aerial operations)

SOROKIN, Zakhar Artemovich, Geroy Sovetskogo Soyuz; RUDIN, M.Z.,  
polkovnik, red.; MURBANOVA, M.D., tekhn. red.

[Master of blue altitudes] Khoziain sinikh vysot. Moskva,  
Voenizdat, 1964. 45 p. (MIRA 17:2)

SOROKIN, Z., Geroy Sovetskogo Soyuza

Years of severe trials. Voen. znan. 40 no.7:47 J1. '64  
(MIRA 17:8)

NOVAKOVSKIY, V. M.; SOROKINA, A.

"The model investigation of stainless steel pitting in chloride solutions."  
report presented at 15th Mtg, Intl Comm of Electrochemical Thermodynamics &  
Kinetics, London & Cambridge, UK, 21-26 Sep 1964.

Karpov Physico-Chemical Inst, Moscow.

ADAMOV, V.; GRAUDYN', L.[Graudina, L.]; PETRZHAK, K.; SOROKINA, A.

Gamma rays from inelastic scattering of 2.95 Mev. neutrons in  $\text{La}^{139}$ .  
Vestis Latv ak no.5:61-64 '61.

34348

S/197/62/000/001/001/002  
B117/B104

24.5500

AUTHORS:

Graudynya, L., Kostochkin, O., Petrzhak, K., Sorokina, A.

TITLE:

$\gamma$ -rays in inelastic scattering of 2.95-Mev neutrons from  $Al^{27}$

PERIODICAL:

Akademiya nauk Latvyskoy SSR. Izvestiya, no. 1 (174), 1962, 51-52

TEXT: The authors studied  $\gamma$ -transitions of  $Al^{27}$  with the aid of the spectra of the  $\gamma$ -rays forming in inelastic scattering of 2.95-Mev neutrons. The studies were made with a scintillation spectrometer, the experimental conditions were the same as in Ref. 1 (V. M. Adamov, L. Ya. Graudynya, K. A. Petrzhak, A. V. Sorokina, Izv. AN Latv. SSR, no. 5, 1961). The weight of the circular Al-scatterer was 333 g. The neutrons scattered by the Al-scatterer into the crystal interact with the NaI(Tl) crystal and bring about a  $\gamma$ -background. The background  $\gamma$ -ray spectrum was measured with an organic-glass scatterer. The number of scattering atoms was the same in aluminum and organic glass. Besides the already known  $\gamma$ -lines with 0.84, 1.02, and 2.25 Mev an additional line with 2.82 Mev was

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B117/B104

$\gamma$ -rays in inelastic scattering ...

detected. Two more lines with the energies of 1.23 and 1.76 Mev were observed which are assigned to  $Al^{27}$  by some scientists and which are associated with the 2.75-Mev level which has hitherto not been observed in the inelastic scattering of neutrons from aluminum. These two lines are assumed to have formed as a result of the pair production caused by 2.25-Mev  $\gamma$ -quanta in the NaI(Tl) crystal and by the subsequent emergence of one (1.76 Mev) or two (1.23 Mev) annihilation quanta from the crystal. This assumption is confirmed by the dependence of the intensity ratio of the 1.25-, 1.76-, and 1.23-Mev lines on the crystal dimensions. A check experiment with an aluminum scatterer placed at an angle of  $90^\circ$  to the deuteron beam showed that the two lines (1.23 and 1.76 Mev) were present although the neutron energy was not sufficient to excite levels higher than 2.25 Mev in  $Al^{27}$ . Hence the  $Al^{27}$  spectrum has the following  $\gamma$ -transitions: 0.83, 1.02, 2.25, and 2.82 Mev. There are 1 figure and 10 references: 3 Soviet and 7 non-Soviet.

SUBMITTED: July 14, 1961

Card 2/2



ALPHABETIC INDEX																									
A-Z													0-9 AND OTHER CHARACTERS												
<p><b>SEROKINA, A. A.</b></p> <p><i>CR</i></p> <p>Determining the basicity of ferric salts in the presence of ferrous salts. A. A. Serokina. <i>Oxidatsionnaya Tekhnika: Kozhoburnoe Profizitsiro</i> 1932, No. 4, 47 8. The basicity is detd. by first converting <math>Fe^{++}</math> into <math>Fe^{+++}</math> by treatment with <math>H_2O_2</math>, removing the excess by heating and titrating the oxidized soln. with 0.1 N <math>NaOH</math> while hot with bromothymol blue as indicator. A. A. R.</p> <p>7</p>																									
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>REGIONAL SYMBOLS</p> <p>SYMBOLS FOR QUALITY</p> <p>SYMBOLS FOR QUANTITY</p>																									

EA SOROKINA, A-A

Colorimetric determination of lithium. A. V. Nikolaev and A. A. Sorokina (M. I. Kalinin Gold Metal Inst., Moscow). *Doklady Akad. Nauk S.S.S.R.* 77, 427-8 (1951). The Kuznetsov (C.A. 43, 8954r) test for Li can be used for detg. small amts. of Li. To a soln. of pure Li salt (in 50 ml.) add 2.5 ml. 20% KOH and 0.5 ml. Na stearate soln. and after 15 min. add 0.9 ml. of the reagent, 1-(o-arsomphenyl-azo)-2-hydroxy-3,6-naphthalenedisulfonic acid, and compare the color with a standard scale. K and Na do not interfere until they exceed the Li concn. by over 500 times, but Ca and Mg give high results if present in 14-17% concn. or higher. Their removal is best effected with KOH. The method suffers from the difficulty of matching the colors, which can be done only in daylight. From 25 to 0.2 mg. Li can be detd. with deviation of not more than 4%. G. M. Kosolapoff



5(2); 21(5) PLAIN I BOOK EXTRACTION SOV/1900  
 Akademiyu nauk SSSR. Komissiya po analiticheskoj khimii  
 Primeneniye radioaktivnykh izotopov v analiticheskoj khimii  
 (Use of Radioactive Isotopes in Analytical Chemistry) Moscow  
 Izdatel'stvo AN SSSR, 1958. 368 p. [Series: Its: Izdatel'stvo AN SSSR, t. 9 (12)]  
 Reprint also inserted. 3,000 copies printed.

Resp. Ed.: I.P. Alimarin, Corresponding Member, USSR Academy  
 of Sciences; Ed. of Publishing House: A.M. Yermakov; Tech.  
 Ed.: S.V. Polynskova.

FOREWORD: The book is intended for chemists and chemical  
 engineers concerned with work in analytical chemistry.

CONTENTS: The book is a collection of the principal papers  
 presented in Moscow at the Second Conference on the Use of  
 Radioactive Isotopes. The problems discussed at the  
 Conference included coprecipitation, aging, and solubility  
 of precipitates, determination of the instability constants

Card 1/10

of complex compounds, separation of rare earth metals, and  
 ion-exchange chromatography. No specific methods are mentioned.  
 There are 351 references, 175 of which are Soviet, 33 German,  
 19 French, 8 Swedish, 2 Hungarian, and 2 Czech.

# TABLE OF CONTENTS:

Use of Radioactive Isotopes (Cont.)	SOV/1900
Lavrenko, A.K., and S.S. Rodin. Study of the Analytical Chemistry of Francium with the Aid of Radioactive Isotope Fr-212	278
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Card 8/10

SOROKINA, A.A.

AUTHORS: Nikolayev, A. V., Sorokina, A. A., Maslennikova, A.S 78-1-29/43

TITLE: Cerium Extraction with Tributyl-Phosphate  
(Ekstraktsiya tseriya tributilfosfatom).

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 1,  
pp. 160-164 (USSR)

ABSTRACT: After a short survey on respective literature (ref. 1-6) the authors state that diethylether is by far the best extractor (table 1). All extractors (with the exception of nitromethane) are explosive under the conditions of strong acidity. The acidity can be reduced to a great extent by salting out (table 2). The strong increase of extraction with the increase of acidity permits the conclusion that cerium-IV is extracted as a complex of the  $H_2/Ce(NO_3)_6$  type. Cerium is precipitated from the ether phase with ammonium; the yield is about 90%. In the place of ammonia also hydrogen peroxide or other reducing substances can be used for extraction. In an  $HNO_3$  milieu the reduction is made more difficult but it acquires a certain specific character (table 8). Subsequently, instructions are given for the production of pure 4-valent cerium as well as for its production from raw materials with a content of rare earths.  $Ce^{144}$  -  $Pr^{144}$  were used as radioactive indicators.

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## Cerium Extraction with Tributyl-Phosphate.

78-1-29/43

From tables 3 and 4 it can be seen that rare earths did not have any salting out effect in the cerium-IV extraction with TBPh (ref. 8). An uncomplete extraction is not determined by the reduction of thorium but by its balanced distribution. The radioactive marking made possible the determination of the fact, that the reduced extraction from concentrated  $\text{HNO}_3$  depends to a great extent on the reduction of cerium-IV as well as on the highly balanced solubility, compared with diluted acids (tables 6-8). The oxidizability of TBPh is greater during its first contact with cerium-IV (some additions are oxidized). Then the oxidizability decreases to a tolerable extent (table 7). In the water phase there is after the 1st extraction about  $1/3$  of the cerium-IV present, the rest consists of cerium III. A worked out method of production for cerium from the raw material is described. Monazite residue or loparit cinders serve as such. Table 9 shows that the yield of cerium in the extract can be increased to from 93-95% by re-using the rinsing water and by a reduction of the number of washings. By means of an addition of  $\text{KBrO}_3$  during the extraction the yield can be increased to from 96-98%. Praseodymium under the given conditions does not at all pass over to the organic phase. In the water phase there remains only its

Card 2/3

78-1-29/43

Cerium Extraction with Tributyl-Phosphate.

radioactive isotope  $\text{Pr}^{144}$ . The activity of the water phase is therefore initially high decreases, however, after from 3-4 hours ( $T_{1/2} = 17,4$  minutes). There remains only a quantity of  $\text{Pr}^{144}$  equivalent to  $\text{Ce}^{144}$  (table 10). In table 7 and others the balanced activity regarding  $\text{Ce}^{144}$  and  $\text{Pr}^{144}$  is mentioned. There are 10 tables and 6 references, 2 of which are Slavic.

ASSOCIATION: Chair of Radiochemistry, Moscow Institute of Non-Ferrous Metals and Gold im. M. I. Kalinin (Kafedra radio-khimii Moskovskogo instituta tsvetnykh metallov i zolota imeni M. I. Kalinina).

SUBMITTED: June 18, 1957

AVAILABLE: Library of Congress

Card 3/3

NIKOLAYEV, M.V.; SOROKINA, A.A.; MASLENNIKOVA, A.S.

Use of radioactive indicators in the analysis of rare earth elements.  
Trudy kom.anal.khim. 9:284-293 '58. (MIRA 11:11)  
(Rare earth metals—Analysis) (Radioactive tracers)





66738

SOV/20-129-2-29/66

5. 2300 (B)

5(2,3)

AUTHORS:

Nikolayev, A. V., Corresponding Member, AS USSR; Sorokina, A. A.

TITLE:

Reciprocal Influence of Rare-earth Elements When Extracted With Tributyl Phosphate

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 2, pp 341-344 (USSR)

ABSTRACT:

The change of extraction with concentration constitutes the simplest case of the influence mentioned in the title. The authors studied this phenomenon on neodymium, samarium, and ytterbium in nitric acid. Tributyl phosphate (TBPh) was saturated before extraction by  $\text{HNO}_3$ . The volumetric ratio of the aqueous and organic phase amounted to 3 : 1.  $\text{Nd}^{147}$ ,  $\text{Sm}^{153}$ ,  $\text{Yb}^{175}$ ,  $\text{Y}^{90}$ , and  $\text{Ho}^{166}$  were used for analytical purposes. The method was thoroughly dealt with in reference 8. It may be observed from table 1 that instead of a "self-salting out" (extraction increase with concentration) the opposite effect occurs in the rare-earth elements, for which the authors suggest the term "self-salting in" (samovsalivaniye). The explanation of this effect is rather simple: the limited solubility of the rare earths in the organic phase. The larger the extraction, the earlier this peculiarity of the salting-in effect must appear, as becomes manifest in such a convincing manner with

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Reciprocal Influence of Rare-earth Elements When  
Extracted With Tributyl Phosphate

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ytterbium. Regarding Nd and Sm, the extraction stability, on the other hand, is maintained up to concentration of 5% and probably somewhat beyond (Ref 4). This difference has a great practical importance, inasmuch as the separation of the yttrium elements is more likely to be successful with lower concentration. With higher concentrations, extraction almost equals that of the cerium group, viz. becomes worse. To obtain a simple explanation of the reciprocal influence, the action of cerium earths, especially didymium, on the extraction of Nd, Sm, Y, Ho, and Yb was determined by means of radio isotopes. Table 2 shows that a 2-5% didymium concentration is not effective in all cases. 20% of didymium diminishes the extraction of all mentioned elements except Yb. The effect decreases from Nd to Ho. In this connection it occurred to the authors that the yttrium earths, but primarily the cerium earths, may exert a stronger reciprocal influence. Indicator quantities of the above mentioned isotopes were introduced into an yttrium concentrate with a composition of Nd, Pr, Sm, La, Eu, Gd, Tb, Dy, Er, Tu, Lu, and V. Even a 2% concentration of this addition has a very noticeable effect.

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Reciprocal Influence of Rare-earth Elements When  
Extracted With Tributyl Phosphate

Thus, the neodymium extraction is rendered lower than is the case with a 20% solution of its own salt. The ytterbium extraction is diminished to the same degree if the addition and its own salt have the same concentration. Table 3 shows this together with the values of a repeated extraction. Finally, six practical indications for extraction are given on the strength of the above rules. There are 3 tables and 8 references, 7 of which are Soviet.

ASSOCIATION: Institut neorganicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Inorganic Chemistry of the Siberian Department of the Academy of Sciences, USSR )

SUBMITTED: July 11, 1959

Card 3/3

L 36242-66 EWT(m)/FCC/EWP(t)/ETI/EWP(n) IJP(r) JD/JG  
ACC NR: AP6005424 SOURCE CODE: UR/0289/65/000/003/0094/0098

AUTHOR: Nikolayev, A. V.; Sorokina, A. A.; Tsubanov, V. G.

ORG: Institute of Inorganic Chemistry, Siberian Branch, AN SSSR, Novosibirsk  
(Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR)

TITLE: Kinetic mechanism of occlusion of impurities by precipitates

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya Khimicheskikh nauk, no. 3,  
1965, 94-98

TOPIC TAGS: lanthanum compound, praseodymium compound, holmium compound,  
yttrium compound, nitrate, chemical precipitation

ABSTRACT: An attempt is made to elucidate the role of certain kinetic factors in systems where no occlusion of impurities by the precipitate should occur in the state of equilibrium. The case of nonequilibrium systems which slowly tend toward an equilibrium is considered, and the rate of this transition for two coexisting precipitates is discussed. Specifically, the time of dissolution of nonequilibrium precipitates formed by a drop of precipitant (10.2 N ammonia solution) in 1.5 and 3% rare earth nitrate solutions was studied. This

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UDC: 542.65

L 36242-66

ACC NR: AP6005424

time was found to increase in the series La-Pr-Y-Ho. The effect of adding salts (5% Mg  $(\text{NO}_3)_2$  and 20%  $\text{NH}_4\text{NO}_3$  solutions) to the nitrates on the dissolution time and consumption of the reagent was also determined. The expected differences in the dissolution time of nonequilibrium rare earth precipitates were confirmed experimentally, and were used to separate La and Pr from Y and Ho. Orig. art. has: 6 tables.

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 002

Card 2/2 *llb*

L 10984-66 EWI(m)/ETC(F)/EWG(m)/EWP(t)/EWP(b) LJP(c) JD/JG/RM

ACC NR: AP6000002

UR/0080/65/038/011/2410/2415

AUTHOR: Ryabinin, A.I.; Sorokina, A.A.

ORG: Institute of Inorganic Chemistry, Siberian Branch AN SSSR  
(Institut neorganicheskoy khimii SO AN SSSR)TITLE: Separation of rare earth elements by fractional precipitation  
with anion exchangers

SOURCE: Zhurnal prikladnoy khimii, v.38, no.11, 1965, 2410-2415

TOPIC TAGS: chemical separation, ion exchange, rare earth element

ABSTRACT: The article presents new data on the fractionation of lanthanum with an EDE-10 anion exchanger in the hydroxyl form. It also demonstrates the possibility of the efficient concentration of samarium with anion exchangers in the hydroxyl form, and the separation of lanthanum from didymium with anion exchangers in the carbonate form. The experimental data is exhibited in tabular form and shows the effect of the amount of the EDE-10 anion exchanger and the duration of the precipitation on the purity of the lanthanum oxide, its degree of extraction, and the amount of precipitated rare earth element. Experiments were carried out with a total rare earth concentration containing 20.7% didymium at room temperature. A further table shows data on the separation of

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UDC: 66.094.94 + 546.65

L 10984-66

ACC NR: AP6000002

lanthanum oxide approximately 98.5% pure from mixtures of rare earth elements of various compositions. It is concluded that double fractionation with the EDE-10 anion exchanger in the hydroxyl form makes it possible to obtain lanthanum oxide 99.5-99.7% pure. The experiments demonstrated the possibility of the efficient separation of other rare earth elements (for example, samarium) in the hydroxyl form by the use of anion exchangers. Using the example of the EDE-10 anion exchanger in the carbonate and oxalate forms, the article shows the possibility of the fractional separation of rare earth elements in the form of salts. Orig. art. has: 1 figure and 5 tables.

SUB CODE: 07/ SUBM DATE: 07Sep63/ ORIG REF: 009/ OTH REF: 007

Card

2/4



DOMBROVSKIY, Vyacheslav Vyacheslavovich, aspirant; SOROKINA, Anna Aleksandrovna, aspirant

Experimental study of internal short-circuits in synchronous machines with wave windings. Izv. vys. ucheb. zav.; elektromekh. 5 no. 7:768-777 '62. (MIRA 15:10)

1. Severo-Zapadnyy zaachnyy politekhnicheskii institut (for Dombrovskiy). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki (for Sorokina).

(Electric machinery, Synchronous—Windings)

KHUTORETSKIY, G.M., inzh.; SOROKINA, A.A., inzh.; SHALYT, L.D., inzh.;  
KARPENKO, V.P., inzh.

Varying magnetic fields in inductor machines. Vest.elektroprom.,  
33 no.4:21-26 Ap '62. (MIRA 15:4)  
(Electric machinery, Synchronous)

DOMBROVSKIY, V.V.; SOROKINA, A.A.

Experimental study of internal short circuits in wave windings.  
Elektrosila no.22:8-12 '63. (MIRA 17:1)

SOROKINA, A.A., inzh.; KARPENKO, V.P., inzh.

Testing the heating of the TVV-200-2 turbogenerator. Elek. sta. 35  
no.6:83-84 Je '64. (MIRA 18:1)

KASHARSKIY, E.G., kand.tekhn.nauk; MACHIN, Ya.A., inzh.; SOROKINA, A.A., inzh.;  
SHAPIRO, A.S., inzh.

Switching-in of a 200 Mw. trubogenerator into a network using  
a self-synchronization method. Elek. sta. 36 no.2:33-34 F '65.

NIKOLAYEV, A.V.; SOROKINA, A.A.; GOLUB', G.I.

Some chemical problems in the dissolution of renal calculi.  
Izv. Sib. otd. AN SSSR no.10:74-79 '61. (MIRA 14:12)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN  
SSSR, Novosibirsk.  
(CALCULI, URINARY)

MEERZHVINSKAYA, Ye.P.; SOROKINA, A.A.

The LMN-0,5 mounted power shovel. Biul.tekh.-ekon.inform.  
no.12:58-59 '58. (MIRA 11:12)  
(Agricultural machinery)

VISHNYAKOV, S.I., dotsent; KHERUVIMOV, P.V.; SOROKINA, A.A., starshiy nauchnyy sotrudnik

Preventing toxic dyspepsia and treating calves affected with it. Veterinariia no.12:34-36 D '63. (MIRA 17:2)

1. Kurskaya oblastnaya nauchno-proizvodstvennaya veterinarnaya laboratoriya. 2. Kurskiy sel'skokhozyaystvennyy institut (for Vishnyakov).



KRASNOVSKIY, A.A.; BYSTROVA, M.I.; SOROKINA, A.D.

Fractionation of different pigment forms in the homogenates of  
ethiolated and illuminated leaves. Dokl. AN SSSR 136 no. 5:1227-  
1230 F '61. (MIRA 14:5)

1. Institut biokhimii im. A.N. Bakha AN SSSR, Mosk. gos. universitet  
im. M.V. Lomonosova. Predstavleno akad. A.N. Tereninym.  
(CHLOROPHYLL)

L 216-1-66 E-11/700 GW

ACC NR: AT6006528

(N)

SOURCE CODE: UR/2634/65/000/084/0005/0131

AUTHOR: Sorkina, A. I.

ORG: State Institute of Oceanography, Moscow (Gosudarstvennyy okeanograficheskiy institut)

TITLE: Types of atmospheric circulations and wind fields over the norther part of the Atlantic Ocean

SOURCE: Moscow. Gosudarstvennyy okeanograficheskiy institut. Trudy, no. 84, 1965. Voprosy morskoy meteorologii i okeanografii (Problems in marine meteorology and oceanography), 5-131

TOPIC TAGS: atmospheric circulation, wind direction, synoptic meteorology, ocean property, atmospheric reaction, cyclone, atmospheric pressure, wind velocity

ABSTRACT: The paper deals with the standardization of synoptic processes and wind conditions over the northern part of the Atlantic Ocean to be applied for the solution of oceanographic problems. On the basis of analysis of daily synoptic data for 55 years, the entire diversity of atmospheric circulation processes over oceans is reduced to six basic types. Data on regular seasonal changes, recurrence periods, and duration of life's cyclones are presented. Principles governing the transformation of certain cyclones into other types are developed. Peculiarities of atmospheric circulations over oceans for individual years as well as changes

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L 21641-66  
ACC NR: AT6006528

which have taken place in the nature of atmospheric circulations for the last semi-centennial period were investigated. Standard charts of the distribution of atmospheric pressure, direction and velocity of the wind, as well as components of tangential pressure of the wind over the ocean are given. Orig. art. has: 63 figures and 30 tables. [Based on author's abstract.] [NT]

SUB CODE: 04/ SUBM DATE: none/ ORIG REF: 021/ OTH REF: 007/

Card 2/2 *ULR*

SOROKINA, A.I.; KRYIS, I.I.

Use of anticoagulants in hypertensive patients with occurrences  
of stenocardia na chronic coronary insufficiency. Vrach.delo no.12:  
1251-1253 D '59. (MIRA 13:5)

(ANTICOAGULANTS (MEDICINE)) (HYPERTENSION)  
(ANGINA PECTORIS) (CORONARY VESSELS--DISEASES)

SOROKINA, A.I., prof., otv. red.; NODEL'MAN, V.S., red.

[Materials of the Out-of-town Session of the All-Union  
Institute of Experimental Endocrinology, September 4-7,  
1963] Materialy Vyezdnoi nauchnoi sessii Vsesoiuznogo  
instituta eksperimental'noi endokrinologii, 4-7 sentyabrya  
1963 g. Irkutsk, 1963. 122 p. (MIRA 17:11)

1. Vsesoyuznyy institut eksperimental'noy endokrinologii.
2. Zaveduyushchiy kafedroy obshchey khirurgii Irkutskogo  
meditsinskogo instituta (for Sorokina).

SOROKINA, A.I.

AID P - 2621

Subject : USSR/Meteorology

Card 1/2 Pub. 71-a - 24/26

Authors : Vitel's, L.A.; A.I. Sorokina and K. M. Sirotov;  
A.G. Bulavko; O.N. Mel'nikuk; B.S. Belov;  
S. M. Seleznev

Title : Scientific meetings and conferences

Periodical : Met i gidr, 4, 61-62, J1/Ag 1955

Abstract : The article reports on different conferences of the Oceanographic Commission of the Geographic Society in Leningrad devoted to the new research on the Sun and its functions, and to the annual issue on hydro-meteorological observations of the sea. Another conference was held in Minsk where hydrological research problems were considered. A conference held in Chernovitsy discussed the problems of short-range forecasting. A conference of the Sverdlovsk Scientific Research Geophysical Observatory reported their findings on electricity in thunderclouds and on diurnal temperature changes.

AID P - 2621

Met i gldr, 4, 61-62, J1/Ag 1955

Card 2/2 Pub. 71-a - 24/26

Institution : None

Submitted : No date

Sorokina, A. I.

USSR/Atomic and Molecular Physics - Heat, D-4

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34413

Author: Sorokina, A. I., Chudnov, A. A.

Institution: None

Title: Free Stationary Convection Between 2 Vertical Coaxial Cylinders

Original Periodical: Uch. zapiski Molotovsk. un-t., 1955, 9, No 4, 49-60

Abstract: Study of a stationary free convection in liquid, filling a cavity between 2 long vertical coaxial circular cylinders, the walls of which are perfect heat insulators, the heat being applied from below. The hydrodynamic equations are used in the usual convection approximation. The boundary conditions are taken to correspond to heat-insulating walls and the presence of an adhesion layer around them. The effect of the end portions of the cavity are disregarded, and therefore the flow lines are considered to be parallel to the axis of the cylinders; the longitudinal temperature gradient will then be constant along the axis. A conversion is made to dimensionless quantities so as to leave in the equations only a single dimensionless parameter, equal to the product of the Grashof and Prandtl numbers. The equations can be solved only for definite values of the above parameters. After a general analysis

1 of 2

- 1 -



USSR/Atomic and Molecular Physics - Heat, D-4

Abat Journal: Referat Zhur - Fizika, No 12, 1956, 34413

Author: Sorokina, A. I., Chudnov, A. A.

Institution: None

Title: Free Stationary Convection Between 2 Vertical Coaxial Cylinders

Original Periodical: Uch. zapiski Molotovsk. un-t., 1955, 9, No 4, 49-60

Abstract: of its spectrum, the problem is solved accurately for 2 first points of this spectrum. The corresponding distribution of the velocity and of the temperature of the liquid is obtained. The calculations are carried out approximately at various values of the ratios of the cylinder radii, and the results are given in the form of plotted equations. The first of the obtained solutions corresponds to such a motion of the liquid, in which it rises and drops in concentric layers (it rises near the internal cylinder and descends near the external cylinder or vice versa); the second solution corresponds to a motion of the liquid, in which the liquid rises on one side of any one diameter and descends on the other side. At a given ratio of cylinder radii, the first of these motions occurs at greater temperature gradients than the second. As the distance between the cylinder decreases, the temperature gradient at which the convective motion curves increases.

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- 2 -

TURCHANINOV, A.A., inzh.; Prinsipali uchastiye: TORCHIN, Ya.G., starshiy nauchnyy sotrudnik; USTYUKHIN, I.I., starshiy nauchnyy sotrudnik; ALEKSEYEVA, T.A., mladshiy nauchnyy sotrudnik; KRASNOIYEVTSEVA, N.V., mladshiy nauchnyy sotrudnik; GORDON, V.N., starshiy tekhnik-laborant; SAVINA, L.A., starshiy tekhnik-laborant; SOROKINA, A.I., starshiy tekhnik-laborant.

Determining the labor input for the manufacture of the basic types of production in the woolen and worsted industry. Nauch.-issl.trudy TSNIIShersti no.18:185-248 '63.

(MIRA 18-1)

PAVLOV, A.M.; PAVLOV, A.M.; PAVLOV, A.M.; PAVLOV, A.M.

Synthesis of some tert-amylperacylates. Ukr. khim. zhur. 30  
no.9:954-955 '84. (MIRA 17:10)

1. Ukrainskiy nauchno-issledovatel'skiy institut plasticheskikh  
mass, Donetsk.

ROMOKINA, A.N.; DATCO, A.Ye.; ROMANTSEVICH, M.S.

Parent-containing peresters. Zhur. org. khim. 1 no.11:2066.  
2051 N '65. (M.E. 12.12,

1. Submitted October 24, 1964.

YENAL'YEV, V.D.; ZAYTSEVA, V.V.; SADOVSKIY, Yu.S.; SADOVSKAYA, T.N.;  
SOROKINA, A.M.

Kinetics of styrene polymerization in the presence of some tert-amyl  
peracylates. Ukr. khim. zhur. 31 no.8:834-838 '65. (MIRA 18:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut plasticheskikh mass.

1. 04/76-6/ EWT(w)/FWP(w)/EWP(c)/ETI/ LIP(c) ID/WB

ACC NR: AP6025715 (A) SOURCE CODE: UR/0365/66/002/004/0416/0424

AUTHOR: Novakovskiy, V. M.; Sorokina, A. N.

ORG: Scientific Research Physicochemical Institute im. L. Ya. Karpov  
(Nauchno-issledovatel'skiy fiziko-khimicheskiy institut)

TITLE: Comparative electrochemistry of stress corrosion cracking and pitting of stainless steel in chloride solutions

SOURCE: Zashchita metallov, v. 2, no. 4, 1966, 416-424

TOPIC TAGS: electrochemistry, stainless steel, steel property, corrosion rate, corrosion resistance, solution kinetics, chloride

ABSTRACT: A systematic comparative study of the electrochemistry of corrosion cracking and pitting was made to help determine the relationship between the process of cracking and certain metallophysical factors. Studies were made on Kh18N9T steel in concentrated boiling  $MgCl_2$  solutions at atmospheric pressure and in dilute chloride solutions heated in an autoclave to  $230^\circ$ . The lowest potential at which normal pitting occurred is more positive than the standard potentials for forming the chlorides of any of the component metals of the steel and more positive than its passivation potential. It is believed that activity and passivity are determined by kinetic competition in the

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UDC: 620.193.01

L 04/10-01

ACC NR: AP6025715

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course of fitting chlorine and oxygen on the parts of the metal where the passivating film has been damaged. A high chloride concentration is not necessary for initial activation, but once solution has started, the anion concentration increases at the site. The increased anion concentration on the metal surface is then not the cause, but the result of the start of active solution. It is however a factor in localizing the solution process since repassivation of the metal by reaction with hydroxyls is obstructed. The current density of solution on a freshly cleaned surface of stainless steel is 7-10 amp/cm<sup>2</sup>. Increasing the positive potential decreases the positive charge in the preelectrode layer and promotes solution. The electrochemical processes in activation and solution of the metal in pitting and corrosion cracking are identical. Rate of solution is not limited by electrochemical reactions but by the diffusion-resistance phases of the electrochemical processes. Hence cracks on the active surface of the metal do not increase in depth linearly, but more slowly, and in contrast to pitting, the initial rate of electrochemical development is almost maintained in an increasingly deep corroded crack. Increasing the Ni content should reduce cracking by affecting the dislocation structure of steel and because Ni is not passivated in concentrated chloride solutions, and would consequently delocalize active solution. High Ni steels should be examined in dilute chloride solutions in which Ni is passivated. Orig. art. has: 4 figures and 2 equations.

SUB CODE: 11,07,20/ SUBM DATE: 24Mar66/ ORIG REF: 005/ OTH REF: 006  
Card 2/2

S/110/62/000/004/001/002  
1004/I204

AUTHOR: Boldina, Ye. A. Engineer, Zvorono, Ya. P., Engineer, Pesotskiy, A. A., Engineer,  
Simo, I. N., Engineer and Sorokina, A. P., Engineer

TITLE: A device for electromagnetic string of an 80-ton electric arc furnace

PERIODICAL: Vestnik elektromyshlennosti, no. 4, 1962, 43-49

TEXT: Electromagnetic stirring of molten metal is achieved by means of a rotating magnetic field created by a flat, two-pole stator located below the furnace. To attain deep penetration of the magnetic field into the metal the frequency of the current should be the order of tenths of a cps. The proximity of the hot (up to 250°C) furnace bottom and the substantial linear loading of the stator create a difficult cooling problem. Air cooling and water cooling systems were constructed and their main technical and economical features compared in a table. Water cooling of the stator by passing water directly through the hollow conductors of the windings proved to be the most effective and economical cooling method, considerably saving the silicon insulating material and saving 30% of copper as compared with the air cooling system. A complete electric diagram of the stator circuit is given. Sinusoidal form of the current feeding the stator was secured by means of a negative voltage feedback network. Distribution of the magnetic field above the stator was studied by means of a Hall probe. Distribution curves are shown on a graph. Velocity of the molten metal under actual operation conditions was estimated visually and it reached 0.35 m/sec. there are 5 figures, and 2 tables.

Card 1/1



Country : USSR  
 Category : Diseases of Farm Animals.  
           Noncontagious Diseases. R-3  
 Abstr. Jour : RZBiol., No. 4, 1959, No. 16847  
 Author : Sorokina, A. S.  
 Institut. : Scientific Research Institute of Animal\*  
 Title : The Methods of Early Diagnosis of Pulmonary  
           Diseases in Sheep in Tadzhik SSR.  
 Orig. Pub. : Tr. n.-i. in-ta zhivotnovodstva i veterinarii.  
           Tadzh. SSR, 1957, 1, 207-213  
 Abstract : The methods of roentgenoscopy are described  
           which were carried out with the help of a  
           portable RU-760 device and of fluoroscopy  
           performed by using a reconstructed medical  
           fluorograph (the horizontal direction of the  
           rays was changed into a vertical direction).  
           -- A. D. Musin

1471

Card:

1/1

\*Husbandry.

17

SOROKINA, A.P.

2

L 14969-65 ENT(m)/ENA(d)/EWP(t)/EWP(b) Pad ASD(m)-3/AFETR MJW/JD/BA/JG/MLX

ACCESSION NR: AT4048094

S/0000/64/000/000/0078/0083

AUTHOR: Blok, N.I., Glazova, A.I., Kozlova, M.N., Lashko, N.V., Morozova, G.I.,  
Sorokina, A.P., Khromova, O.A.

TITLE: Comparison of methods for the phase separation of nickel chromium alloys

SOURCE: Spektral'ny\*ye i khimicheskiye metody\* analiza materialov (Spectral and chemical methods of materials analysis); sbornik metodik. Moscow, Izd-vo Metallurgiya, 1964, 78-83

TOPIC TAGS: nickel alloy, chromium alloy, phase separation, Alpha phase, carbide phase, electrolysis

ABSTRACT: The most widely used methods of electrolytic phase separation for heat-stable Ni-Cr alloys were investigated and compared. The baths proposed by different organizations for isolating the  $\alpha$ -phase and carbide phase are as follows: 1. 10 g  $(\text{NH}_4)_2\text{SO}_4$ , 10 g citric acid, 1200 ml  $\text{H}_2\text{O}$ ; 2. 5 g  $(\text{NH}_4)_2\text{SO}_4$ , 15 ml  $\text{HNO}_3$ , 35 g citric acid, 1000 ml  $\text{H}_2\text{O}$ ; 3. 3%  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ , 3.5%  $\text{NaCl}$ , 5%  $\text{H}_2\text{SO}_4$ ; 4. 20 g  $\text{CuSO}_4$ , 10 g sodium citrate, 5 ml  $\text{H}_2\text{SO}_4$ , 1000 ml  $\text{H}_2\text{O}$ ; 5. anolyte: 10 g  $\text{CuSO}_4$ , 1 g citric acid, 250 ml  $\text{C}_2\text{H}_5\text{OH}$ , 1000 ml  $\text{H}_2\text{O}$ ; catholyte: 10 g  $\text{CuSO}_4$ , 10 g citric acid, 10 ml  $\text{C}_2\text{H}_5\text{OH}$ .

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ACCESSION NR: AT4048094

1000 ml H<sub>2</sub>O; 6. 100 ml H<sub>3</sub>PO<sub>4</sub>, 1000 ml H<sub>2</sub>O. The current density in all cases was 0.05-0.07 amps/cm<sup>2</sup>, for 60 minutes at room temperature. The chemical analysis of the  $\chi$ -phase and anode residues is described in detail. Two heat-stable Ni-Cr alloys were used: EI437B (0.037 % C, 20.57% Cr, 2.75% Ti, 0.70% Al) and EI617 (0.056% C, 15.17% Cr, 3.67% Mo, 2.00% Ti, 5.30% W, 0.21% V, 1.70 % Al) under different conditions of tempering. As shown by tabulated data, the electrolytes used are suitable for the separation of the  $\chi$ -phase. The electrolyte with a smaller amount of ethyl alcohol gives a slightly decreased amount of  $\chi$ -phase. Variation in the pH from 0.8 to 2.6 does not affect the total amount of  $\chi$ -phase. The phase separation proceeds most favorably in electrolytes containing 30 g of citric acid during electrolysis. X-ray data show that for EI437B, a carbide of the type Ti(C,N) and Me<sub>23</sub>C<sub>6</sub> and for EI617 a carbide of the type TiC, Me<sub>23</sub>C<sub>6</sub> and Ni<sub>n</sub>(W, Mo, Cr)<sub>m</sub>C are obtained. The best results were obtained with the VIAM bath (50 ml HCl 100 ml glycerol; 1000 ml CH<sub>3</sub>OH, current density 0.05 amps/cm<sup>2</sup> 1 hr.) Orig. art. has: 4 tables and 1 figure.

ASSOCIATION: none

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L 14969-65

ACCESSION NR: AT4048094

SUBMITTED: 12Feb64

ENCL: 00

SUB CODE: MM, IC

NO REF SOV: 007

OTHER: 001

Card 3/3

SOROKINA, A. V., KHITRIN, L. N., and GOLOVINA, Ye. G.,

"Effect of Preheating of the Gasoline-Air Mixture on the Flame Propagation Velocity."  
(Study of Combustion Processes; Collection of Articles on Work Done by the Power  
Institute imeni G. M. Krzhizhanovskogo AS USSR) Moscow Izd-vo AN SSSR, 1958. 123 p.

(Laboratory of Combustion Physics).

For abstract see Khitrin, L. N.

86107

S/112/59/000/012/023/097  
AO52/A001

11.7200

Translation from: Referativnyy zhurnal, Elektrotehnika, 1959, No. 12, p. 23,  
# 24079

AUTHORS: Khitrin, L.N., Golovina, Ye.S., Sorokina, A.V.

TITLE: The Effect of Preheating the Benzine-Air Mixture on Flame Propagation Speed ✓

PERIODICAL: V sb.: Issled. protsessov goreniya, Moscow, AN SSSR, 1958, pp. 77-80

TEXT: A study of the effect of preheating the benzine-air mixture on the flame propagation speed has been carried out with three burners of different diameter with a different mode of ignition. One burner has been used for laminar conditions and two others for turbulent conditions. The temperature of preheated mixture has varied from 17° to 227°C. Both for laminar and turbulent conditions the flame propagation speed increases with the temperature of preheating, and the increase is more intensive in the region of poorer mixtures. Experimental data ✓

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86107

S/112/59/000/012/023/097  
AO52/A001

The Effect of Preheating the Benzine-Air Mixture on Flame Propagation Speed

are plotted on a diagram with the difference between absolute flame speed at a given temperature and at 0°C plotted along the Y-axis, which enables one to obtain an analytical relation between the speed of flame and the preheating temperature of the mixture. It is pointed out that the effect of initial preheating on the flame propagation speed is the same for turbulent and laminar conditions. X

A.D.A.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

SOV/120-59-5-33/46

AUTHORS: Gorodyskiy, V.A., Romanov, Yu.F., Sorokina, A.V. and Yakunin, M.I.

TITLE: Electro-capillary Method for the Preparation of Thin Layers of Radioactive Substances on Organic Films

PERIODICAL: Pribery i tekhnika eksperimenta, 1959, Nr 5, pp 128 - 130 (USSR)

ABSTRACT: The method is based on the deposition of the substance on pure and metallised organic films by spraying the solution from the end of a capillary tube under the action of an electrical field. The system is shown schematically in Figure 1, in which 1 is an aluminium ring carrying a colloidal film ( $1-2 \mu\text{g}/\text{cm}^2$ ) covered with a thin layer of silver (about  $3 \mu\text{g}/\text{cm}^2$ ) and in contact with the ring. The silver layer is in electrical contact with the ring to which a negative potential is applied. The end of the capillary tube, whose diameter is 0.1 - 0.3 mm, is at about 1 - 2 cm above the film. At the top, the capillary is wider (1 mm diameter). A thin

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SOV/120-59-5-33/46

Electro-capillary Method for the Preparation of Thin Layers of  
Radioactive Substances on Organic Films

platinum wire 5, 0.05 mm in diameter, is let through almost to the end of the capillary tube. The experiment showed that the capillary must be very uniform and the end of the platinum wire carefully prepared. The wire is at a positive potential. In order to deposit a substance of a pure organic film, the modified installation shown in Figure 2 was used. In this figure, 1 is a glass container, 1' is a metallic electrode, 2 is the capillary, 2' is the wire, 2" is the solution to be deposited, 3 is a glass plate, 4 is a plexiglass ring and 5 is a holder. The ring with the colloidal film is on the surface of the conducting liquid in the vessel 1. Using this apparatus, films may be obtained such that the thickness differs by 20% between the centre and the outer edges. Figure 3 shows  $\alpha$ -particle tracks obtained in an emulsion placed in contact with some typical radioactive sources obtained in the above manner. ✓

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SOV/120-59-5-33/46

Electro-capillary Method for the Preparation of Thin Layers of  
Radioactive Substances on Organic Films

Acknowledgments are made to K.A. Petrzhak.  
There are 3 figures and 1 English reference.

ASSOCIATION: Radiyevyy institut AN SSSR (Radium Institute  
of the Ac.Sc., USSR) ✓

SUBMITTED: August 6, 1958

Card 3/3

SOROKINA, A.V.

21(6)

AUTHORS:

Ruk, M. A., Bugorov, S. S.,  
Il'inskiy, Z. A., Petrov, Yu. G., Petukhin, A. M.,  
Solntsev, V. M., Sorokina, A. V., Ushakov, V. M.

TITLE:

The Yield of  $\text{Ru}^{103}$  and  $\text{Ru}^{106}$  in the Fission of  $\text{U}^{235}$  and  $\text{U}^{238}$  by Fast Neutrons (Vychody  $\text{Ru}^{103}$  i  $\text{Ru}^{106}$  pri dalenii  $\text{U}^{235}$  i  $\text{U}^{238}$  bystrykh neytronom)

PERIODICAL:  
ABSTRACT:

Atomaya energiya, 1959, Vol. 6, Nr. 5, pp 577-578 (USSR)  
The yields of  $\text{Ru}^{103}$  and  $\text{Ru}^{106}$  were determined by means of a relative measurement with respect to the  $\text{Mo}^{99}$ -yield.

Uranium oxide ( $\text{UO}_2$ ) enriched  $>90\%$  and plutonium oxide were pressed in aluminum caskets. The latter were surrounded by a 1 mm thick Cd-sheet, and the whole assembly was filled finally closed aluminum cylinders. The caskets were filled with boron carbide (all-round thickness at least 2 cm). The samples were made from 2 g of  $\text{UO}_2$  and 4 g of plutonium, and were irradiated for 22.2 hours in a water-filled beam tube of the heavy-metal reactor of the AN SSSR (AN USSR). The neutron spectrum is characterized by the ratio

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The Yield of  $\text{Ru}^{103}$  and  $\text{Ru}^{106}$  in the Fission of  $\text{U}^{235}$  and  $\text{U}^{238}$  by Fast Neutrons

507/89-6-5-18/33

$E_n > 1.5 \text{ Mev}$ ;  $E_n > 2.5 \text{ Mev} = 4.0 \pm 1.5$ . From the irradiated samples  $\text{Ru}$  and  $\text{Mo}$  was chemically separated, after which thin  $\beta$ -preparations (thickness  $< 20 \mu\text{g}/\text{cm}^2$ ) were produced on an organic foil; their activity was measured by means of a 4 $\pi$ -counter. An aluminum filter of  $5 \text{ mg}/\text{cm}^2$  thickness is attached, so that only the  $\beta$ -rays of  $\text{Ru}^{103}$  and  $\text{Ru}^{106}$  reach the counter. Determination of the absolute activity of  $\text{Ru}^{103}$  and  $\text{Ru}^{106}$  was carried out by means of further filtering and recording the absorption curves of these radiating bodies. It is possible, from 2 equations with 2 unknown measured values, to calculate the absolute activity of  $\text{Ru}^{103}$  and  $\text{Ru}^{106}$ . Herefrom it is possible to calculate the absolute fractions. From the latter and from the measured absolute  $\text{Mo}^{99}$   $\beta$ -activity (which will be dealt with by a publication in the near future) it was possible to calculate the following yields:

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The Yield of  $\text{Ru}^{103}$  and  $\text{Ru}^{106}$  in the Fission of  
 $\text{Pu}^{239}$  and  $\text{Pu}^{235}$  by Fast Neutrons

307/89-6-5-10/55

	$\text{Ru}^{103}$	$\text{Ru}^{106}$
$\text{Pu}^{239} (\text{a.t.})$	$5.7 \pm 1.0 \%$	$4.6 \pm 0.8 \%$
$\text{Pu}^{235} (\text{a.t.})$	$3.2 \pm 0.6 \%$	$0.71 \pm 0.12 \%$

There are 1 figure, 1 table, and 1 Soviet reference.

SUBMITTED: December 22, 1958

Cont 3/3